# Operating instructions

## Trailed min-till drill
## MegaDrill

Before operating the seed drill for the first time, please read carefully through these operating instructions and the safety precautions ("For your own safety") and ensure that they are observed.

Ensure that the operators are properly qualified, trained in its use and everyday maintenance, and familiar with the hazards. Make sure that other users are supplied with the safety precautions.

Ensure that all applicable accident prevention regulations are observed, along with other generally recognized safety procedures and any legislation that may apply with respect to road traffic and to health and safety in the workplace.

Observe the warning labels at all times! (DIN 4844-W9)

Instructions in this manual which are marked with this symbol, and its presence on the unit, warn of danger (for explanation see appendix).

The 'Beware' symbol indicates safety instructions which, if not observed, may cause danger to the unit and its operation.

The 'Note' symbol indicates machine-specific instructions which should be followed for trouble-free operation of the unit.

**Loss of warranty**

This Trailed min-till drill is designed and built exclusively for standard agricultural use. Use for any other purpose will be regarded as unauthorized operation and no liability whatsoever will be accepted for any damage or injury that may occur as a result.
The term "authorized operation" also covers the full observance of all operating, maintenance and servicing specifications and the exclusive use of original spare parts.
The use of non-original accessories, spares and/or consumables that do not carry specific approval from RABE shall void all warranty liabilities.

We accept no liability for damage, loss or injury resulting from the carrying out of unauthorized repairs and/or modifications to the unit nor from failure to supervise its use.

Delivery claims (transit damage, missing parts) should be made immediately and in writing.

Warranty claims, warranty conditions and our liability exclusions are based on our general terms of delivery.

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## Use of heavy mounted implements

### Important additional information on the combination of tractor and mounted implement.

The use of mounted implements via the front and rear three point linkages must not cause the total permitted weight, the permitted axle loading, or the permitted tyre loading of the tractor to be exceeded. The tractor's front axle must always bear at least 20% of the tractor's unladen weight.
Before attaching accessories, ensure that these requirements are fulfilled, either by carrying out the following calculations, or by weighing the tractor/unit combination.

Determination of the overall weight, axle loadings, tyre loadings, and the minimum required ballast.

The following data are needed for the calculation:

$T_L$ (kg) unladen weight of tractor (1)

$T_V$ (kg) front axle loading of empty tractor (1)

$T_H$ (kg) rear axle loading of empty tractor (1)

$T_G$ (kg) total permitted weight of tractor (1)

$G_H$ (kg) total weight of rear mounted implement/rear ballast (2)

$G_V$ (kg) total weight of front mounted implement/front ballast (2)

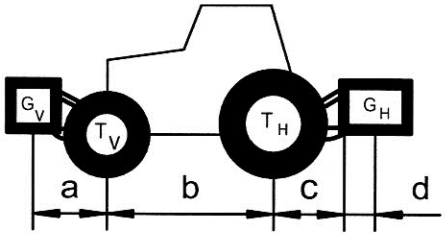
a (m) distance between centre of gravity of front mounted implement/front ballast and midpoint of front axle (2)(3)

b (m) wheel spacing of tractor (1)(3)

c (m) distance between centre of the rear axle and centre of lower link arm balls. (1)(3)

d (m) distance between centre of the lower link arm balls and centre of gravity of the rear mounted implement/rear ballast (2)

(1) See operating instructions for tractor.
(2) See operating instructions for implement, or determine its weight.
(3) To be measured.




### Rear mounted implements and front/rear combination

**1) CALCULATION OF MINIMUM FRONT BALLAST GV min**

$$G_{Vmin} = \frac{G_H \bullet (c+d) - T_V \bullet 0{,}2 \bullet T_L \bullet b}{a + b}$$

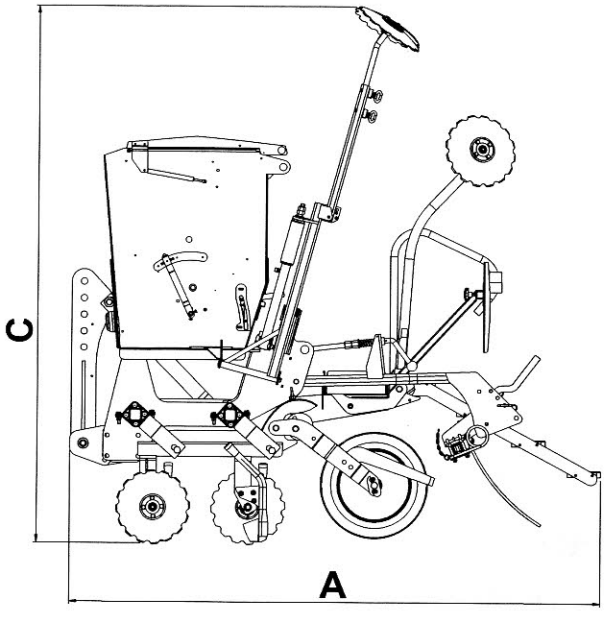
Transfer into the table the calculated minimum ballast required at the front of tractor.

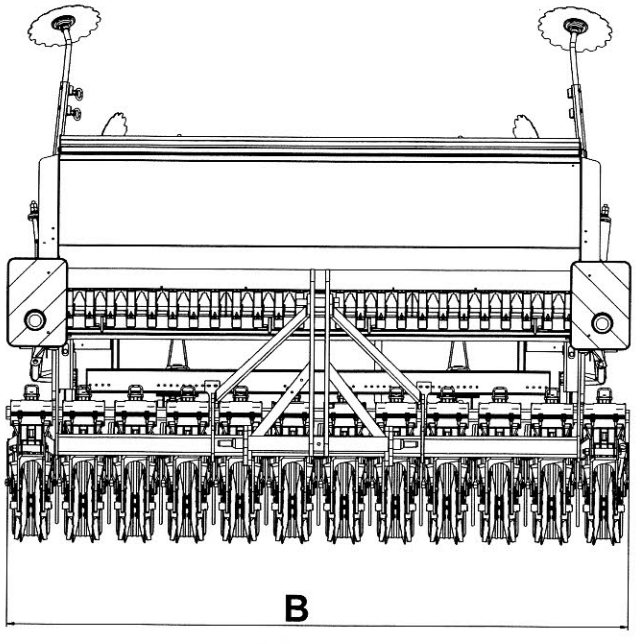
### Front mounted implements

**2) CALCULATION OF MINIMUM REAR BALLAST GH min**

$$G_{Hmin} = \frac{G_V \bullet a - T_H \bullet b + 0{,}45 \bullet T_L \bullet b}{b + c + d}$$

# Machine data




| MegaDrill | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Model type | Working width in mm (approx.) | Seed hopper outlets | Number of rows | Row spacing in (cm) | Weight in (kg) | Seed hopper volume | Length in mm (approx.) | | |
| | | | | | | | A | B | C |
| MegaDrill 3000 | 3000 | 24 | 24 | 12,5 | 1500 | 1000l | 2600 | 3000 | 2600 |

Dimensions and weights are for basic model.

## Safety precautions

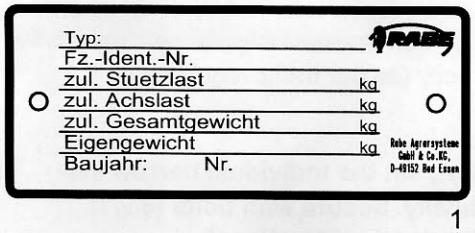
DO not allow anyone to stand between the tractor and the unit during coupling or uncoupling. Note that this includes stepping between the tractor and unit to operate the external hydraulic controls! Risk of injury!

Set the tractor's hydraulic lifting system to "position control" before coupling and uncoupling!

Before operating the tractor and the unit, always ensure that they fulfil operating and road traffic safety requirements. Observe permitted axle loads (with full seed hopper), and overall weight!
When transporting, all necessary protective equipment must be available and in place!
Before starting or operating the unit, always check to ensure that no one is standing within its turning circle or operating area. Also take into account the reach of the marker arms!
DO NOT stand or ride on the unit or remain within its turning circle or operating area!
Before leaving the tractor unattended or performing adjustments or maintenance, lower the unit front and rear, switch off the engine and remove the ignition key!
There is danger of crushing and shearing within the areas of the three point linkage, the hydraulic extension and retraction gear, the marker arm mechanism!
Danger exists from disc and roller parts continuing to rotate if the unit is raised while moving at high speed. Only approach these parts after they have ceased to rotate!
Handle hydraulic transmission components and hoses with care, as they become hot during operation!
Immediately shut down the hydraulic drive if the blower begins to vibrate – then check the fan blade wheel as it has been dynamically balanced! Imbalance indicates danger and damage to the blower
Before maintenance or adjustment of the metering equipment, and when travelling on public roads, switch off the electronic system (to '0') and make the unit free of current (disconnect the supply and unit circuits)!
When transporting, lock the tractor's hydraulic control unit against accidental activation!
Only carry out adjustment or other work on the unit when it has been lowered front and rear!

When filling the hopper with dressed seeds, and cleaning the unit with compressed air, beware that dressing is poisonous. Protect sensitive body parts accordingly (e.g. protective goggles, mouth protection, gloves). Before the first use, and after a long period of disuse, ensure that all bearings are sufficiently lubricated, that all screws are tightened, that the hydraulic equipment has no leaks, and that the tyre pressure is correct!

- width from 2.55m to 3m maximum
- maximum height 4m
- maximum overall weight of the combination 16t, of which 20% on the front axle
- maximum working pressure of the hydraulic system 200bar
- the manufaktures plate **(1)** is documentary evidence, and must not be tampered with or defaced.




1

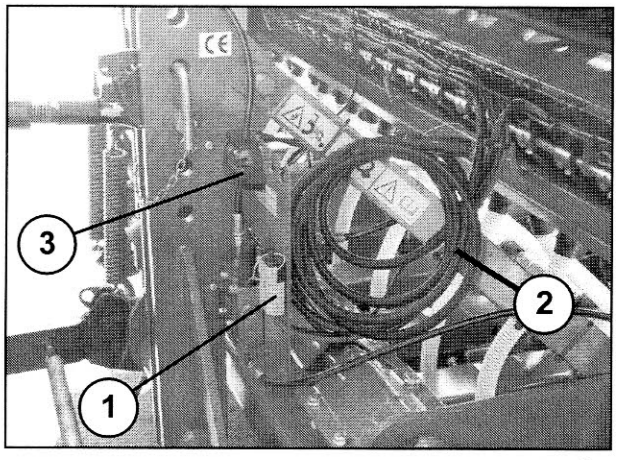
## 1. Connection

### 1.1 Coupling and uncoupling

Three point connection (cat. II or cat. III).

First connect lower link cross shaft, then attach the upper link.

After coupling, secure the coupling equipment properly.

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Set the machine horizontal at the upper link (upper edge of seed hopper).

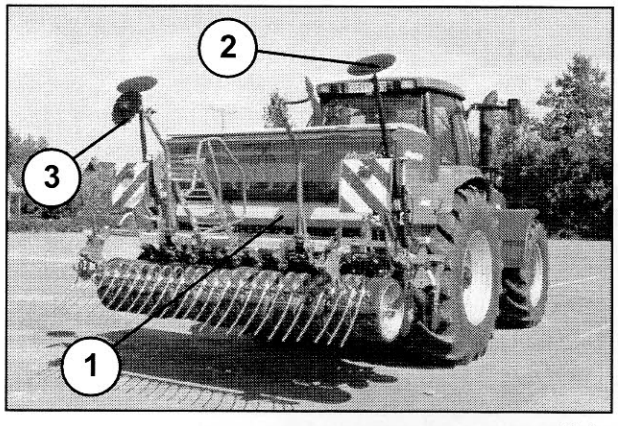
In the working position, the lower link should be free at the side; on a slope limit the sideways play; in the extended position, fix at the side.

Hydraulic hose – for marker arms or similar – connect to a single action control unit.

Electrical supply for electronic control:
12 V from the DC socket of the supply wiring harness.

After coupling the seed drill, fill with a good quantity of seed, and empty before uncoupling!

**When uncoupling, make sure the site is stable!**
(firm ground support, level surface)

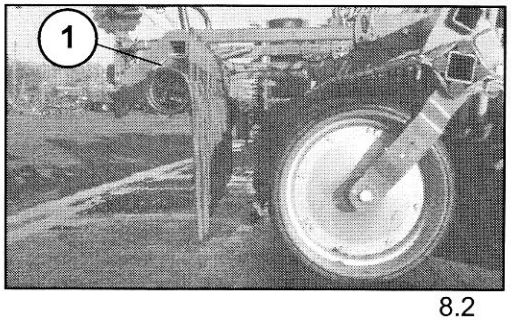



8.1

The soil loosener for the tractor track should be raised.

### 1.2 Electrical connections

There are three electrical connections at the front of the machine:
- Supply cable **(8/1)** for the electrical metering drive.
- Control cable **(8/2)** connection for the drill computer.
- Supply cable **(8/3)** for the seed drill lighting.



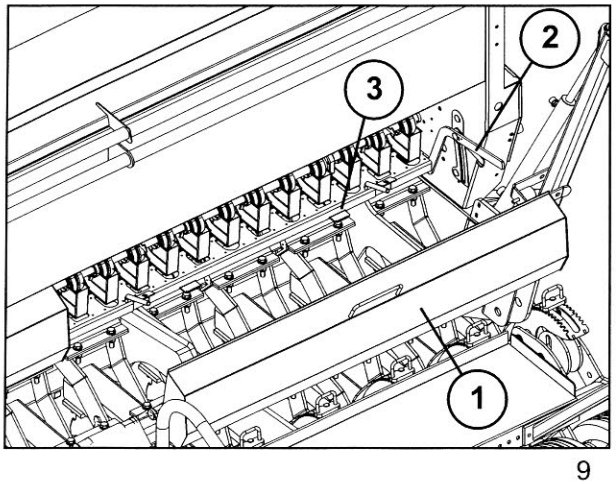

8.2

## 2. Preparation for transport

Close the seed hopper lid. Secure the calibration troughs in the raised position **(8.1/1)**. Fold in the marker arms and bolt them in place **(8.1/2)**. Raise the tramline markers – bolts **(8.1/3)**. Check that the lighting equipment and warning boards are functioning correctly (as per traffic regulations).

**Attention!:**
**For transport, set the individual harrow elements vertically. Secure with bolts (8.2/1). Observe transport instructions!**

## 3. Seed hopper: filling/emptying

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### 3.1 Filling

Fill the seed drill only when coupled and in the lowered position.

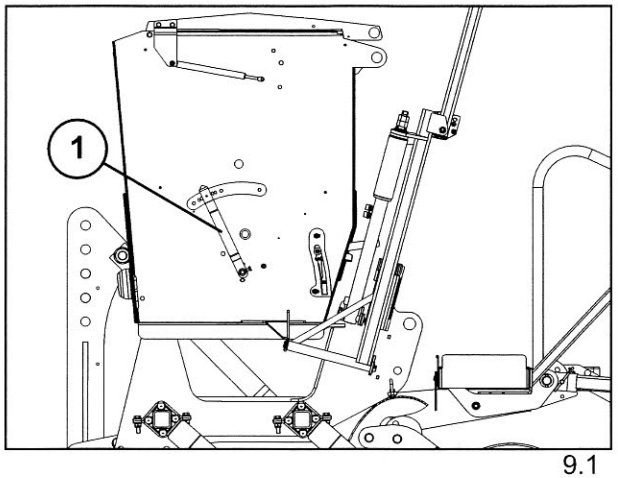
The level in the hopper is indicated by the electronic contents display.

Do not run the seed hopper to emptiness; when the contents are low, distribute the seed evenly.

### 3.2 Emptying

Lower the seed drill.

Release the emptying troughs (**9/1**) by lifting, and set horizontally.




9.1

Unlock the seed guide track on both sides (9/2) – and lower.

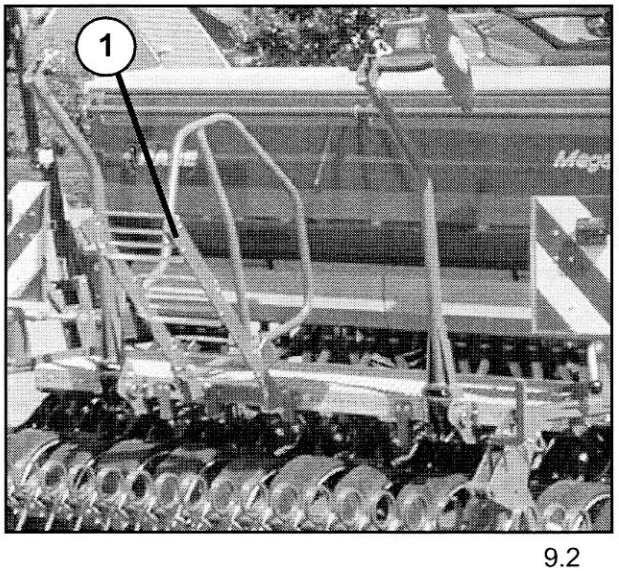
Position the troughs on the seed guide track **(9/3)**.

Open all shut-off slides **(10/A)**.

Open the bottom flap fully – move the positioning lever to the stop **(9.1/1)**.

**3.3 Cleaning the seed hopper:** Blow out with compressed air – protect yourself from toxic seed dressing dust!

Leave the bottom flap fully open so that if the machine has been laid up, mice, etc. do not attempt to gnaw through the seed hopper, which may smell of seed.



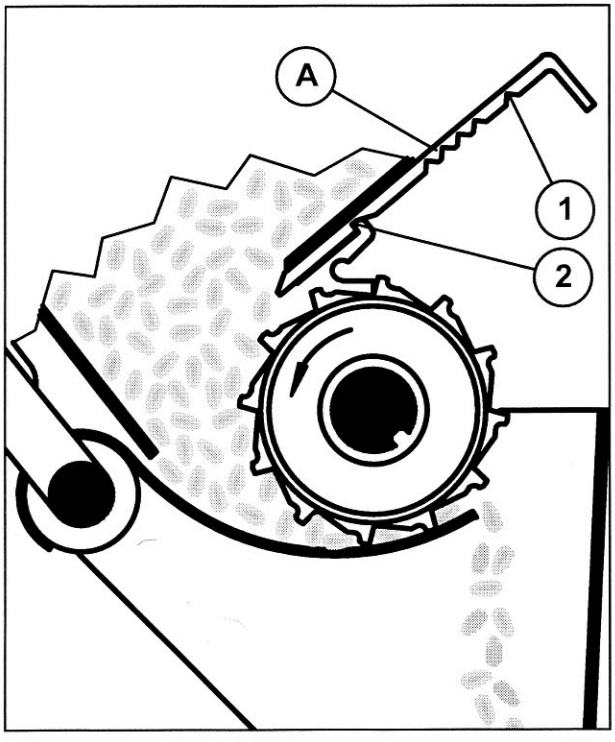

9.2

### 3.4 Loading bridge

The loading bridge with its steps and railings makes loading the seed hopper easier.

When the drill is in use, raise the steps (**9.2/1**)!

**It is forbidden to mount or stay on the bridge while the drill is in motion!**
**Keep walking surfaces clean!**

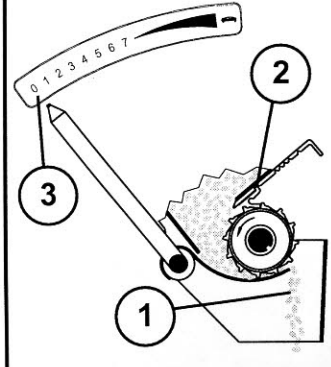



10

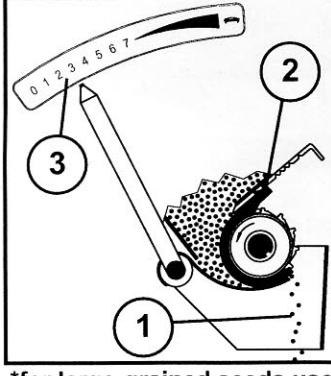
**4. Setting the sowing rate**
**Shut-off slides**
Shut-off slides **(10/A)** have 2 functions:
- Closing / opening the seed hopper outlets
Shut-off slides are not to be used to regulate the sowing rate!
The wrong slide setting can cause variations in sowing rates on inclines!
Slide setting for sowing:
The slide must always be fully opened (**10/2**).
Slide closed = setting 1 **(10/1)**
Do not use any intermediate setting.

**4.1 Sowing table**
Because of varying grain densities as well as dressing and other seed-specific properties, the values in the table should be treated only as guide-lines. A calibration test should be carried out before every sowing.

## Sowing table




| Normal sowing | | |
|---|---|---|
| **1. Seed** | **2. Slide** | **3. Bottom flap** |
| Barley | open | 0 |
| Wheat | open | 0 |
| Rye | open | 0 |
| Triticale | open | 0 |
| Oats | open | 0 |
| Grass | open | 0 |
| Peas* | open | 4-5 |
| Beans* | open | 4-5 |

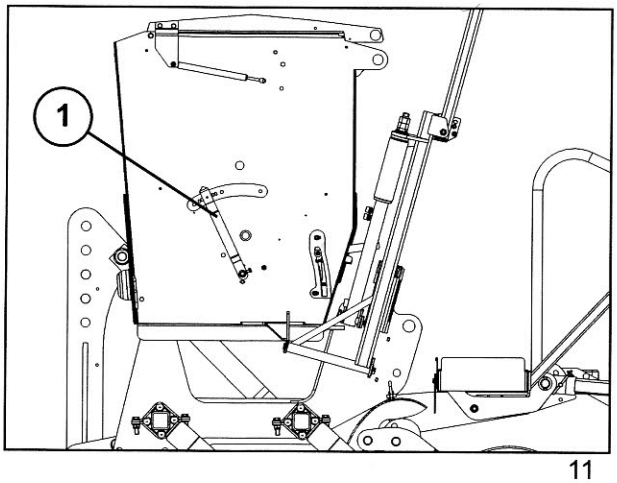



| **Reduced sowing with reduction insert (9106.00.46)** | | |
|---|---|---|
| Rapeseed | open | 0 |
| Mustard | open | 0 |
| Fodder radish | open | 0 |
| Phacelia | open | 0 |
| Clover | open | 0 |

***for large-grained seeds use coarse sowing wheel (9106.21.10)!**

10.1

**Normally no agitator shaft is required for the seeds listed above.**

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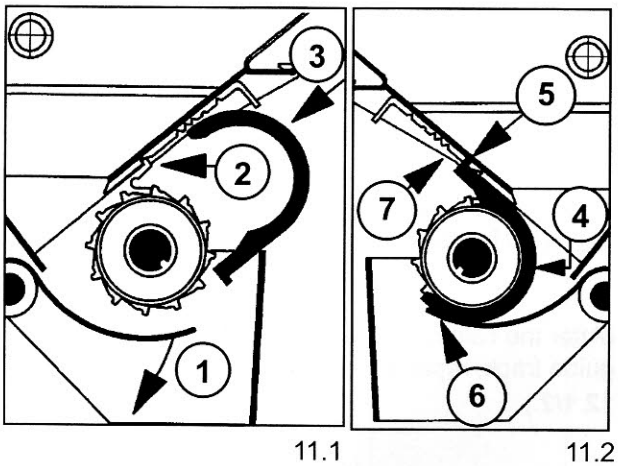
### 4.2 Bottom flap

Settings 0 to 7 are available for different seed sizes, as shown in sowing table **(10.1)** – positioning lever **(11/1)**.
If during calibration "grain spraying" or broken grain occurs for seeds which turn out to be large, then set the flap one position higher.
(For cereals and fine seeds, use reduction insets and bottom flap setting "0".
Adjust the bottom flaps in setting "1".)




11.1 11.2

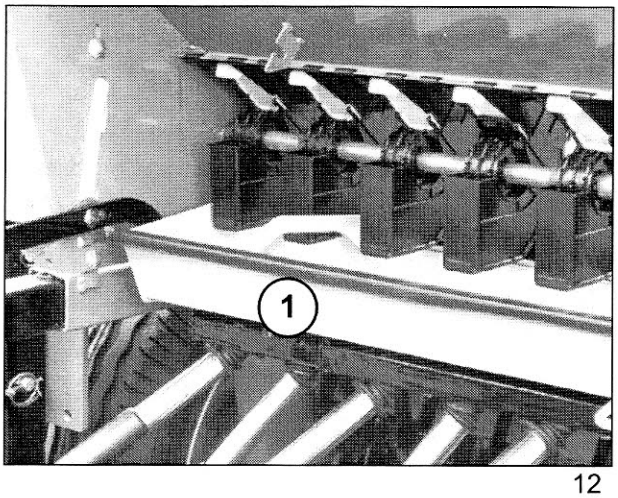
### 4.3 Fine seed reduction insets

For fine seeds (e.g. rapeseed) reduction inserts are used.
Install as shown in figs.**11.1 + 11.2**:
1. Open bottom flaps (positioning lever at setting "3").
2. Shut-off slide set to "open".
3. Push the reduction insert onto the sowing wheel (fig. **11.1**) and
4. turn towards the seed hopper (fig.**11.2**), until
5. the stop of the reduction inset abuts against the shut-off slide.
6. Set bottom flap to position "0".
7. Reach into the seed hopper and press the reduction inset against the sowing wheel.

The reduction inserts are correctly fitted when they abut against the shut-off slide (**11.2/5**), the bottom flap (**11.2/6**) and the sowing wheel (**11.2/7**).
Sowing setting: Bottom flap at position "0".
Shut-off slide set to "open".

## 5. Calibration

**When changing between seed types, a calibration test must always be carried out, because seeds types behave very differently depending on density, grain size, shape, and dressing.**




12

**The metering shaft is driven electrically!**
**Push button (12.2/1)**

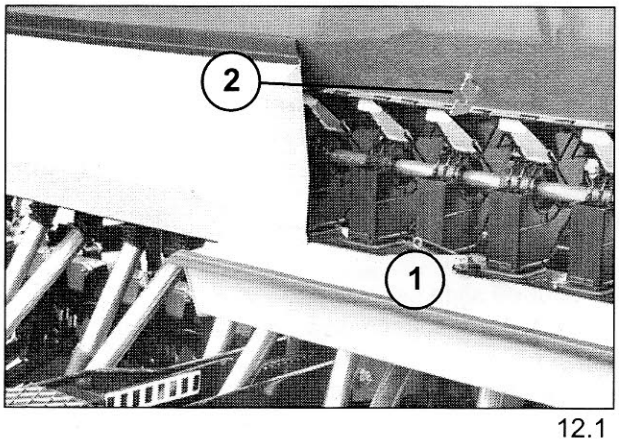
To ensure a reliable current / voltage supply, the tractor engine should be running during calibration. When the seed guide track is lowered, the metering stop of the monitoring unit is switched off.

The "MegaDrill" can be calibrated while stationary – without extending.

Ensure that the machine is horizontal. (Seed hopper upper edge)

Close the shut-off slides of the sowing housings which are not sowing.

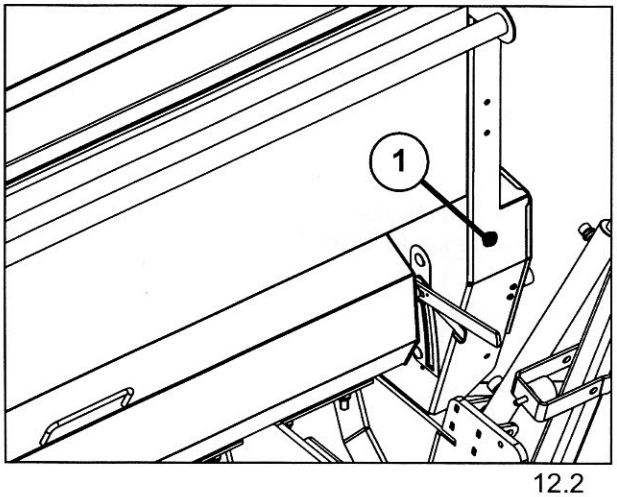
Tramline switching must be deactivated.
(all sowing wheels are turning).




12.1

Shut-off slides
Bottom flap
Reduction insets
} set correspondingly!

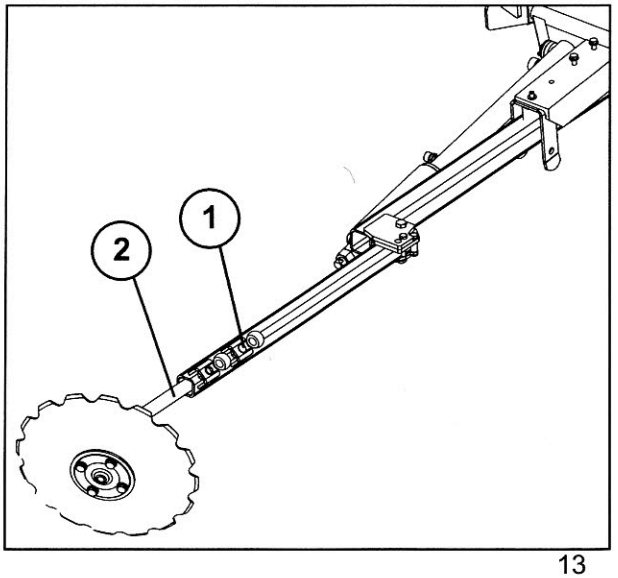
Position the emptying troughs on the seed guide track **(12/1)** – see "Emptying".




12.2

(After the calibration restore: Raise and lock seed guide track, replace troughs **12.1/1,** and engage **12.1/2**.)

**Further details on calibration are in the overview and operating instructions for the Artemis II and Wizard controls.**

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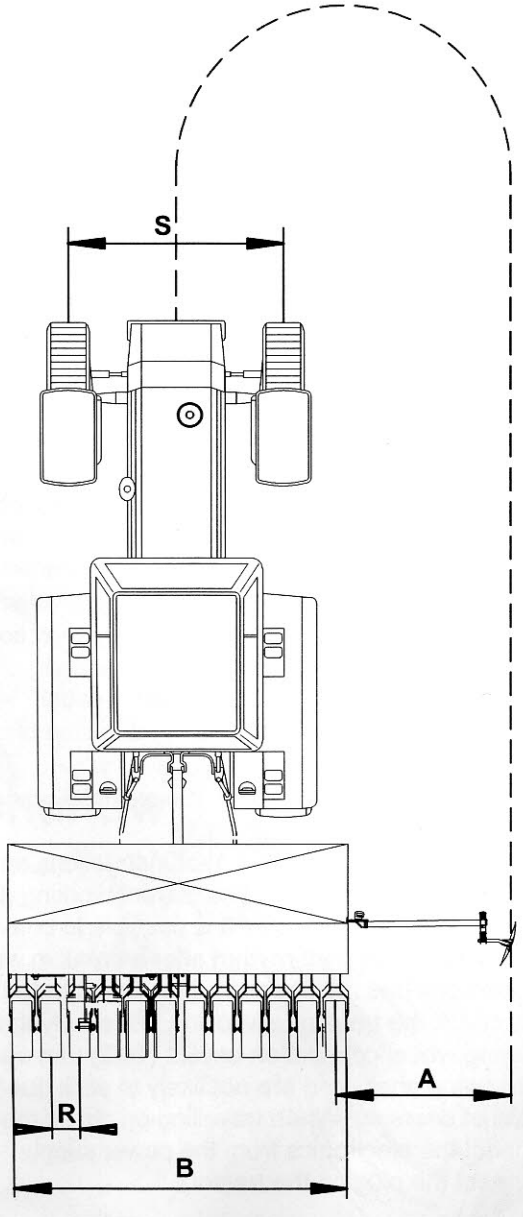
**6. Marker arms**

The marker arm discs can be adjusted to the centre line of the tractor. Setting: bring the booms into the working position. Set the disc support point (**13/1**) accordingly; (dependent on the drill machine's working width and row spacing, as well as the tractor wheel separation for track marking).




13.1

Maker arm switching occurs via a hydraulic change valve on the seed drill.
For this, a single acting control valve on the tractor is necessary.
Fine tuning is carried out by moving the marker disc.

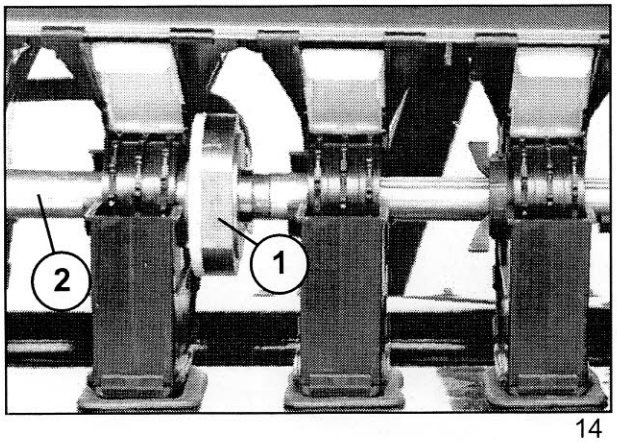
Determined from tractor centre line (**13.1**), measurement from outermost coulter:

$$\frac{\text{Working width + row spacing}}{2} = A$$

Example: 3 m working width (B = 300 cm)
12 cm row spacing (B = 12 cm)
170 cm distance between tractor wheels (B = 170 cm)

$$\frac{B + R}{2} \quad \frac{300 + 12}{2} = 156 \text{ cm} = A$$

By turning the axis of the disc **(13/2)**, it can be given a greater or lesser "bite" for heavier or lighter soil.
The marker arms are switched before the headland using a single action tractor control unit.
... at the end of a run, set to "Raise" – both tracker arms are raised.
... when starting a run set to "Lower" – when working, the control unit must always remain at "Lower" (floating position).
For transporting, fold in the marker arms and bolt them in place **(8.1/2)**.



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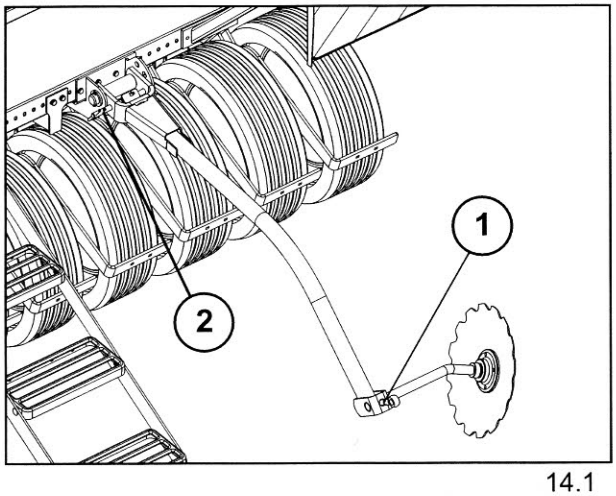
## 7. Tramline marking

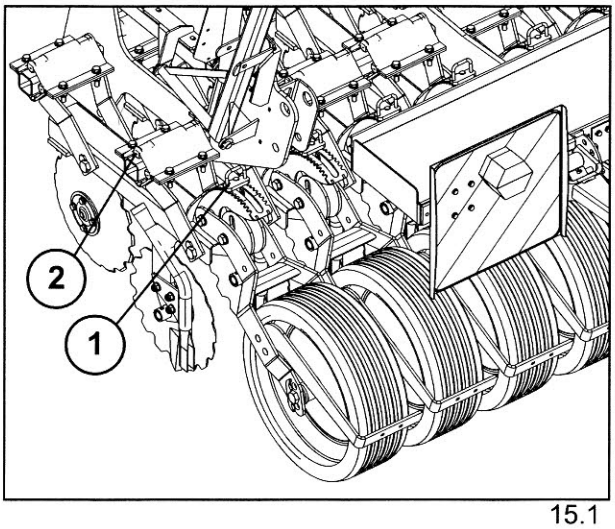
When "laying tramlines", the discs of the tramline markers mark the tramline track behind the seed harrow. Switching occurs automatically.
Set the discs to the tramline width , and set the "bite" according to the soil **(14.1/1)**.
When transporting, fold the disc booms and fix in place – plugs (**14.1/2**).;
move into the working position by releasing from the raised non-working position.
The impulse for electronic forward switching of the tramlines always occurs (at the headland) when the drill is raised.

### 7.1 Tramline marking in action

At the edge of the field (marker arm lowered on the field side), set the tramline pattern to the correct initial value – e.g. for 3 and 4 rhythm, set it to 2.
Automatic switching forward occurs by means of sensors, e.g. when changing marker arms.
For symmetrical tramline rhythms with even numbers, start at the field edge with ½ the working width of the seed drill; for this, the left hand half of the machine can be switched off – pull the plug out in the middle of the sowing shaft.
If the dung spreader has edge spreading equipment, it is possible to start at the field edge with full drill width and tramline.
For each wheel track 2 or 3 sowing wheels can be switched off (magnetic switch / sowing wheel connection covers **14/1+2)**.
"Switching off" occurs when the magnetic switch is supplied with current; thus for example, if the electronics break down, work may be continued using the full number of rows. (If required, the shut-off slide could be closed.) For asymmetric tramlines, switching off occurs for a wheel track on one side only for two opposing traverses. The magnet on the unneeded outside of the curve must therefore be deactivated by unplugging, according to the chosen curve direction. (Attention: as supplied ex-works, both magnetic clutches are always connected. Therefore after choosing the tramline rhythm and the direction of travel, check the magnets accordingly!)
If no tramlines are being laid but the electronic monitoring is active, select "0" rhythm.
(See attachment A section 5.1.1 for instructions on setting the tramline rhythm). The current working data remains stored, and therefore it is possible to continue working in the right rhythm after a break in work.
If the seed drill has not been used for an extended period, check the tramline switching, especially that the sowing wheel connection covers **(14/2)** turn easily on the sowing shaft, and are not likely to stick due to deposits of dressing. When travelling on public roads, disconnect the electronics from the power supply (disconnect the plug on the tractor).



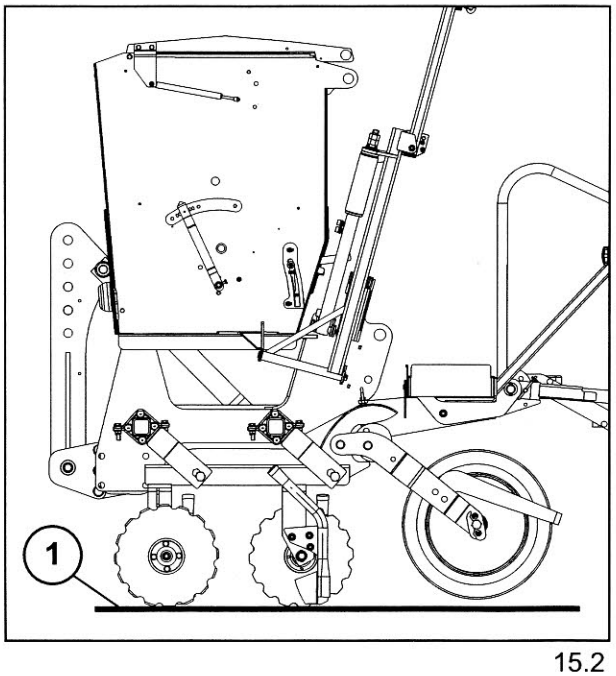
14.1




15.1

## 8. Sowing track

Setting coulter pressure The sowing pressure has a definite value. It arises from the portion of the weight of the machine which is transferred to the various coulters and pressure rollers. The parallelogram-mounted coulter elements can move upwards out of the way. The disc coulters are spring-mounted via the rubber elements (**15.1/2**).




15.2

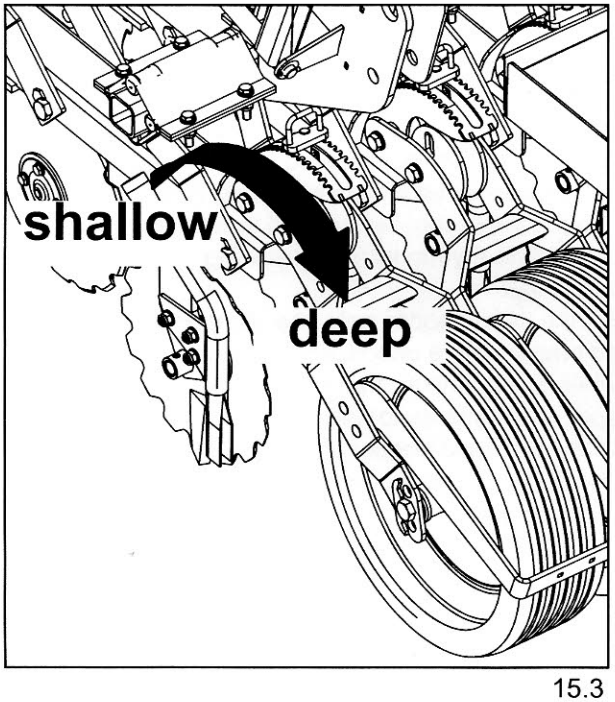
### 8.1 Setting of sowing depth / pressure roller

In advance, set the pressure rollers (**15.3**) according to the desired sowing depth – eccentrically adjustable (16-fold), fix by inserting bolt in the appropriate hole (**15.1/1**).

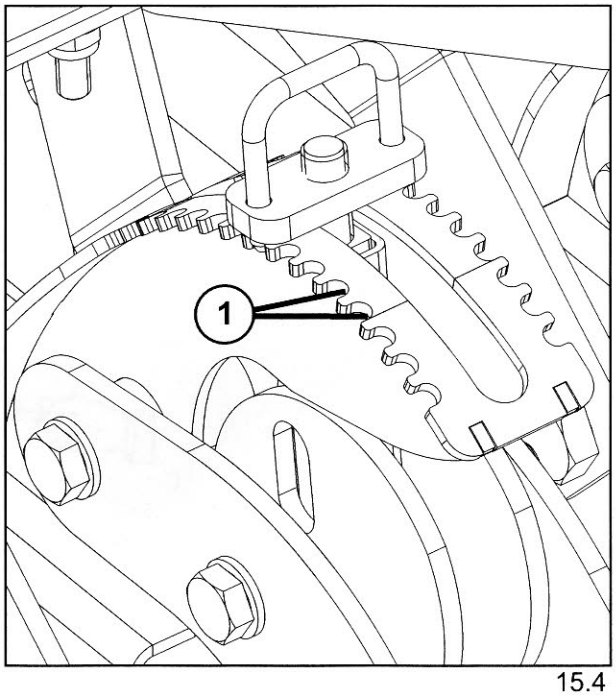
**- at the same time, adjust all pressure rollers to the same setting**

...for "normal sowing depth", on a firm level surface set the pressure rollers to the level of the discs (**15.2/1**). (**4th or 5th hole 15.4/1**)

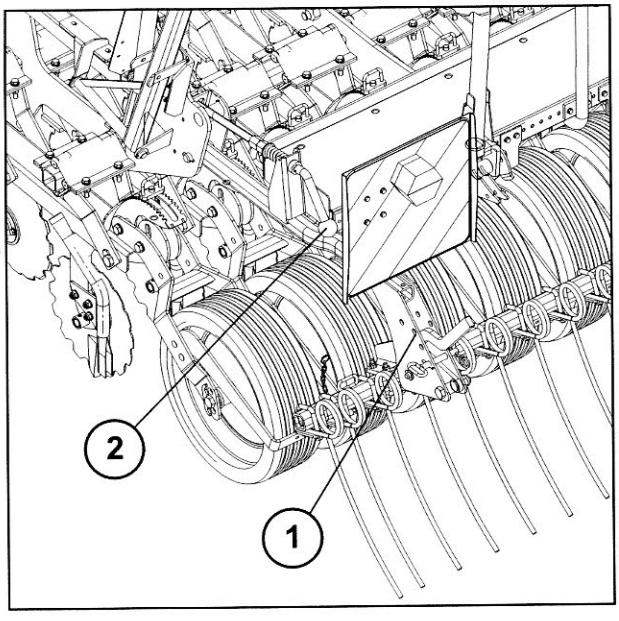
If necessary, correct the sowing depth while working (use eccentric in drilled plate **15.1/1**)




15.3




15.4




16.1

**9. Harrow**

The angle of the sprung harrow fitted to the "MegaDrill" can be adjusted by relocating the bolt in the drilled bar **(16.1/1)**.

Setting of working pressure and height is carried out with the sprung spindle **(16.1/2)**.

The normal angle of the harrow on easily friable soil should be about 45°.

- on heavier soil, set the tines somewhat steeper.
- with a high proportion of straw or mulch, set the tines flatter to reduce the danger of blockage.

The bolt must always be inserted below the holder for the harrow **(16.1/1)**. If the harrow is set too rigidly, it cannot avoid obstructions when the machine is lowered.

**When transporting, the harrow tines should be set vertically.**

(see transport position)

**10. Instructions for use**

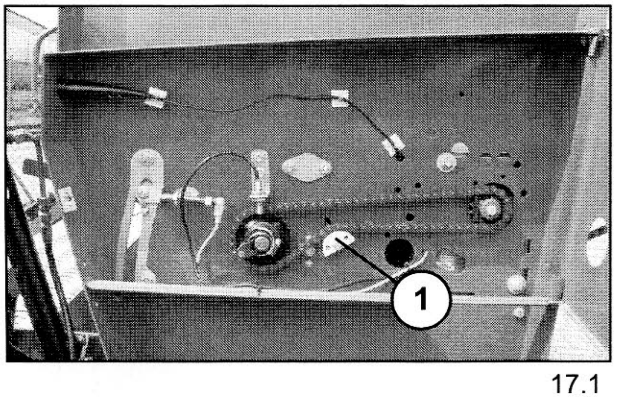
- run the seed drill with only slight side play on the lower link and in a "horizontal" position (keep the upper edge of the seed hopper horizontal – set using the upper link).
- use the tractor hydraulics in the "floating" setting. Hydraulic lift (or drill lift) and marker arms,
- raise the seed drill sufficiently high before the headland,
- lower the seed drill when starting (not when parked) – to avoid coulter blockages.
- adapt speed of travel to the conditions, so that the seed is placed at an even depth (under good conditions, solo use, up to approx. 12 km/h).
- Check settings (e.g. calibration test): Metering process, shut-off slides, bottom flap, drive settings (fix emptying troughs in raised position).
- when starting sowing – and thereafter at regular intervals – check that all coulters are sowing (no blockages).
- build-up of dressing can alter the flow properties of the seed; for certainty's sake, a check should be carried out after roughly 2 fills of the seed hopper.
- no responsibility is accepted for damages as a result of blockages or variations in sowing rates.
- check marker arm setting and switching as well as the tramline rhythm including sowing wheel stop.
- Fill the seed hopper only after coupling the seed drill, and empty before uncoupling (danger of tipping)
- when filling, ensure that no foreign bodies (pieces of paper, attachments to sacks) get into the seed hopper.
- Close the seed hopper lid.
- check the hopper contents on the contents display: ensure even distribution.
- raise the folding steps on the loading bridge when drilling
- before extended periods of disuse, empty the seed hopper because of the hygroscopic properties of the seed and dressing.

Beware that the dressing is an irritant and is toxic!

## 11. Maintenance

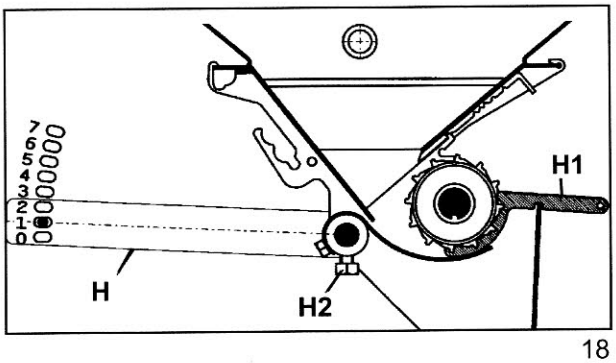
When working on the machine when it is connected, switch off the engine and remove the ignition key!
Do not work on a raised seed drill!
If it must be raised, then use additional supports to prevent unintentional lowering!
Before working on hydraulic parts, ensure that there is no pressure in the circuit!
Dispose of oil properly! (Mineral based hydraulic oil).

**After running for the first time (approx. 8h) tighten all screws, and thereafter check regularly that they are tight.**
Lubricate bearings; after approx. every 50h of use, grease the disc bearings of the marker arms and of the tramline markers (lithium based multipurpose
grease) and the drive chains.
Joints, spindles, and sowing wheel covers **(14/2** – for tramline switching) should be kept mobile. (Do not oil sowing shaft and sowing guides).
Retension the drive chains – at **(17.1/1)**.



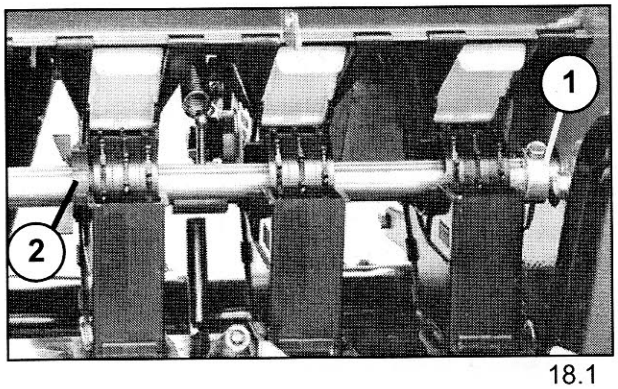
17.1

Keep the discs clean on disc coulters.
Check hydraulic hose leads regularly and replace if damaged or brittle (see spare parts list). Hose leads undergo natural ageing; do not use for more than 5 to 6 years without replacing.
When cleaning with a water jet (especially high pressure), do not ain it directly at electrical components (e.g. magnetic clutches, cable connections), and bearings (e.g. bearings of single disc coulters).
Touch up damage to paintwork.
Remove dirt from the "Artemis/Wizard" keyboard only with a damp cloth and mild household cleaner. Do not immerse the housing in liquids!



18

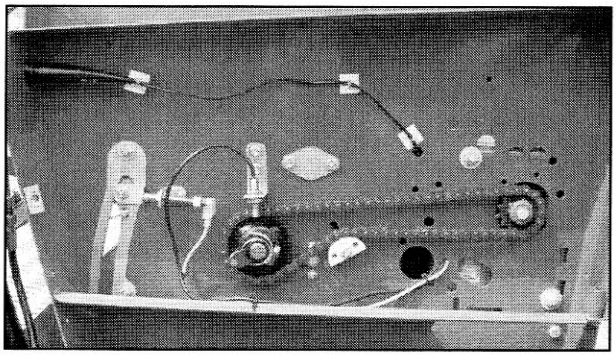
**Check bottom flap:** before sowing, when the seed hopper is empty, check the setting of all bottom flaps, using adjustment gauge **(18/H1)**; to do this, set the positioning lever for the bottom flap **(18/H)** to "**1**", and turn the sowing shaft so that its flat surface faces downwards.
While turning the adjustment gauge next to the middle sowing wheel row of cams from top to bottom, push the gauge between the sowing wheel and the bottom flap, until the gauge grip abuts the sowing housing.
The adjustment gauge must just pass between without any play; correct by loosening the screw **(18/H2)** and screw tight again in the correct position (i.e. without play).



18.1

**Remove sowing shaft:** Open the shut-off slides.
Turn the sowing shaft so that the shaft clutch (right) is roughly , horizontal, having previously slackened and moved the ring **(18.1/1)**.
Turn the bearing (**18.1/2**) clockwise (90°; press the latch) and move to the side.
Remove the shaft towards the rear. (Reinstall in the reverse order: insert bearing, turn anticlockwise through 90°. Fix ring **(18.1/1)** "over" the clutch.)

**When carrying out welding work on the tractor or on connected equipment, and when charging the battery or connecting a second battery (as starting help) always break the connection to the electronics box.**



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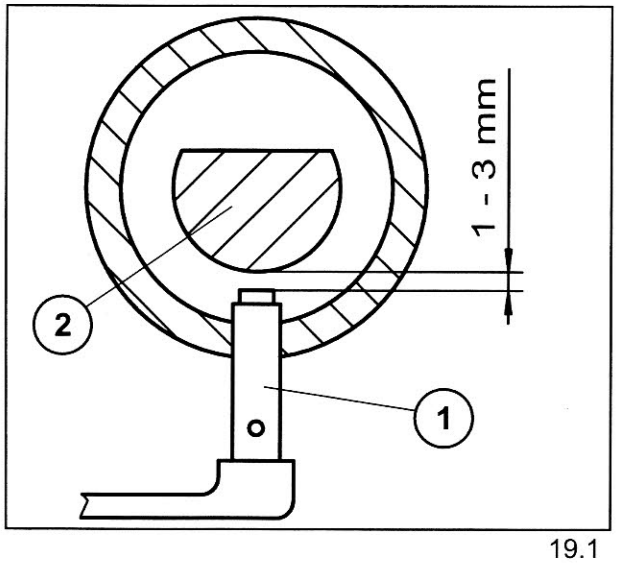
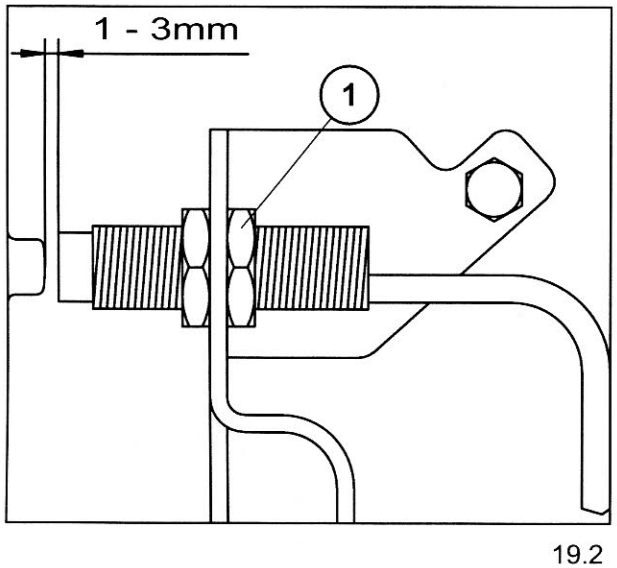
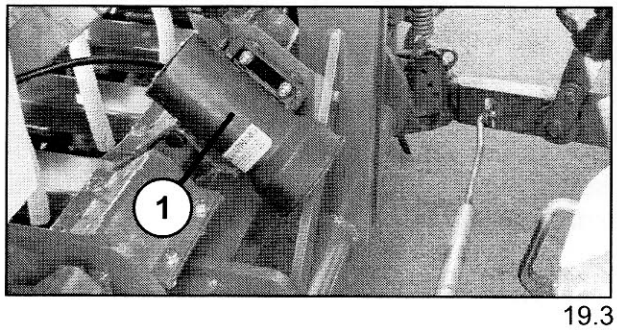



19.1




19.2



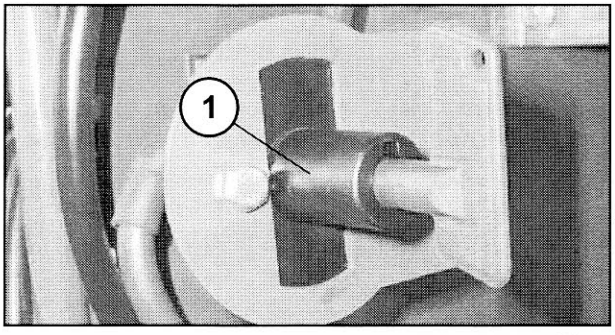

19.3

**12. Sensor setting (19)**
The inductive sensors (**19.1 and 19.2**) are set at a separation of **1 to 3 mm**;
Set the sensor **(19.1/1)** as follows: Turn the shaft (**19.1/2**) so that the flat of the shaft does not face the threaded sensor bore. Turn the sensor by hand until it touches the shaft, then turn back 3 1/2 revolutions and tighten with the nut **(19.2/1)**.

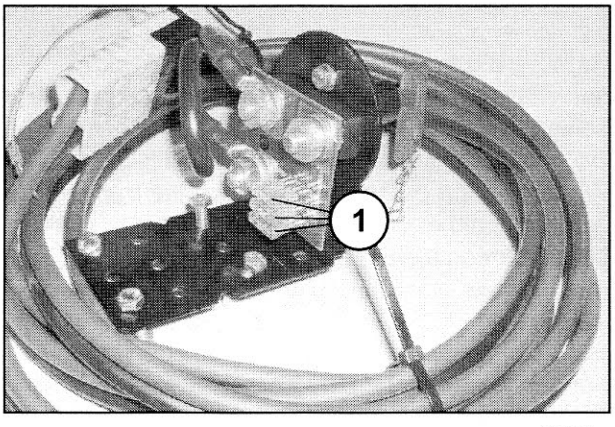
A function control (LED) is built into the sensor so that when making a correction or test connection, the sensor's functioning is indicated.

Remove dirt from the drill computer box with a soft cloth and mild household cleaner (do not use solvents).
**Do not immerse** the housing in liquids!
When carrying out welding work on the tractor or on connected equipment, and when charging the battery or connecting a second battery (as starting help) always break the connection to the electronics box.
Before extended periods of disuse, empty the seed hopper because of the hygroscopic properties of the seed and dressing.
Beware when cleaning that the dressing is an irritant and is toxic. Protect sensitive body parts such as mucous membranes, eyes, and breathing passages. Do not allow soil to dry onto the coulters. Grease bearing with grease nipples regularly – every 100h.
Once the "MegaDrill" has been cleaned, protect coulters and sensor discs against corrosion, and lay up in a dry building.
Protect the electronics box (and connection cable) from moisture, and store in a dry place.
Close off the socket on the supply harness (if necessary apply dust protection covering).
Check hydraulic hose leads regularly and replace if damaged or brittle (see spare parts list). Hose leads undergo natural ageing; do not use for more than 6 years without replacing. When cleaning, do not aim water jets (especially high pressure) directly at bearings.

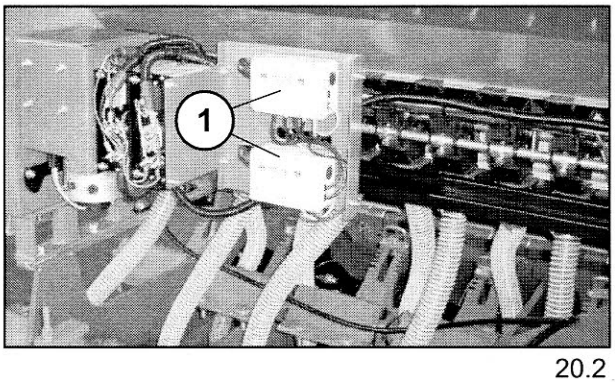
**13. Radar (19.3/1)**
The radar supplies distance-related measurements to the control system. Determination of distance is carried out free of contact.



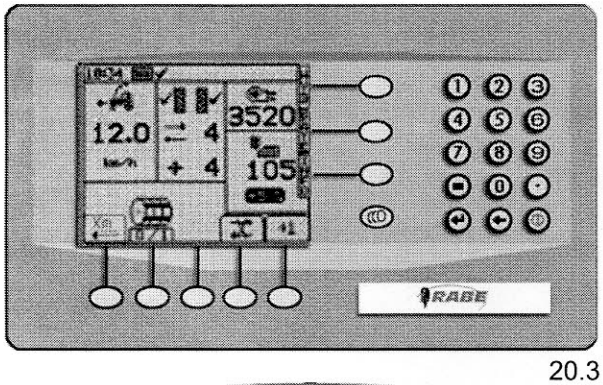

20



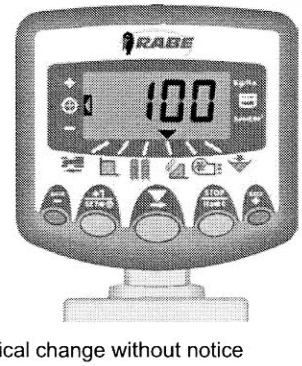

20.1




20.2




20.3




20.4

**14. Power supply (20)**
Supply current is provided directly from the tractor battery; the supply harness (including main fuses, main switch **(20/1)** and socket – are mounted permanently on the tractor.

**15. Fuses**

| Fuses - overview | | |
|---|---|---|
| **Location** | **Designation of fuse** | **Rabe part number** |
| **Supply harness (20.1/1)** | Flat fuse for vehicle 20 A | 9012.14.34 |
| **Tramline (20.2/1)** | Flat fuse for vehicle 10 A | 9012.14.10 |

**16. Processor terminal**
The use of the processor terminal **(20/3)** is described in detail in the directions for use for the Artemis II. A summary of the Artemis II directions for use is given in the Artemis II overview.

The use of the processor terminal **(20/4)** is described in the directions for use for the Wizard controller.

## 17. Checking the sowing precision on seed drills with electrical metering drive.

### Rule 1

The electrical and manual calibration tests using the ground wheel must always produce the same calibration values.
(Negligible differences only are permitted)
(possible only on machines having a ground wheel)

### Rule 2

The electronic area counter setting must be based on the working width of the drill.

### Rule 3

Undertake calibration only when tramlines are **deactivated**.

### Rule 4

Undertake calibration only when increased sowing rate is **deactivated**.

### Rule 5

Select the recommended metering wheel and bottom flap settings.

### Rule 6

Use proven household weighing scales
Do not use spring balances or sack scales.

**Only by observing the rules listed above can the most accurate sowing be obtained.**

## 18. Tips for use

- Make the drilling combination ready for use: Track loosener, tilling tools, marker arms, tramline setting, tramline marking.

- Check settings (e.g. calibration test):
Metering wheel setting (for fine seeds close coarse metering wheel), bottom flap, calibration flap, seed quantity setting.

Switch on the electronics, check tramline rhythm, set cycle position for the first run.

- Before sowing, check all coulters for blockages, and then re-examine regularly afterwards.

- Check sowing depth

- Adjust travelling speed to the quality of work, so that the seedbed stays even.

- When filling the seed hopper, ensure that no foreign bodies (pieces of paper, attachments to sacks) get into the hopper. Keep the hopper lid closed while working. Keep an eye on the level of seed in the hopper ('low level warning' indicator).

- before extended periods of disuse, empty the seed hopper and metering equipment because of the hygroscopic properties of the seed and dressing. Beware that the dressing is an irritant and is toxic!

- Removal of residual seed - see 'Emptying'

## 11. Transport precautions

Put the unit into the transport position. Check that it is suitable to be transported.
Travelling on the unit and staying within its area of danger are forbidden.
Towed units weighing more than 3 t require a traffic permit. If the axle load is greater than 3 t, they must have a braking system.

**Depending on the traffic permit, maximum speed is either 25 km/h or 40 km/h.**

Adapt transport speed to the conditions of the highway. Take care on slopes and in curves. Take the centre of gravity into account.
Observe the requirements of the road traffic regulations. These make the user responsible for the tractor and trailer being connected together in a way that is safe to traffic when travelling on public highways.

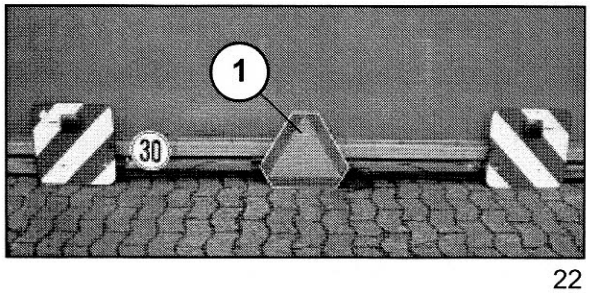
Working equipment must not impede the safe movement of the combination. The connected unit must not cause the permitted tractor axle load, overall weight, and the load bearing capacity of the tyres (depending on speed and air pressure) to be exceeded. To ensure steering safety, the front axle loading must be at least 20% of the unladen vehicle weight.

The maximum permitted width for transport is 3m. The overall length of the combination may be 18m maximum.

If the maximum permitted dimensions are exceeded, a special permit must be obtained. To avoid danger to traffic, no part must project from the outline of the vehicle more than is absolutely necessary. If it cannot be avoided that parts project, they should be covered and made conspicuous. Safety measures must also be taken to make the outermost contours of the unit conspicuous, and to ensure safety at the rear. For example, fit red/white striped warning shields (423 x 423mm, stripes 100mm width at an angle of 45° running outwards and downwards).

Towed or saddle units should be fitted with red rear reflectors, and yellow reflectors at the side when being moved, as well as having their lights illuminated, even during the day (as well as clearance lights when the unit projects more than 400mm beyond the tractor lights).
The safety coverings required for transport in traffic on public highways are available from RABE.
The safety information (TÜV) required for a traffic permit can also be obtained from RABE.

When transporting on public roads in Poland, fit the warning triangle **(40/1)** centred on the unit.

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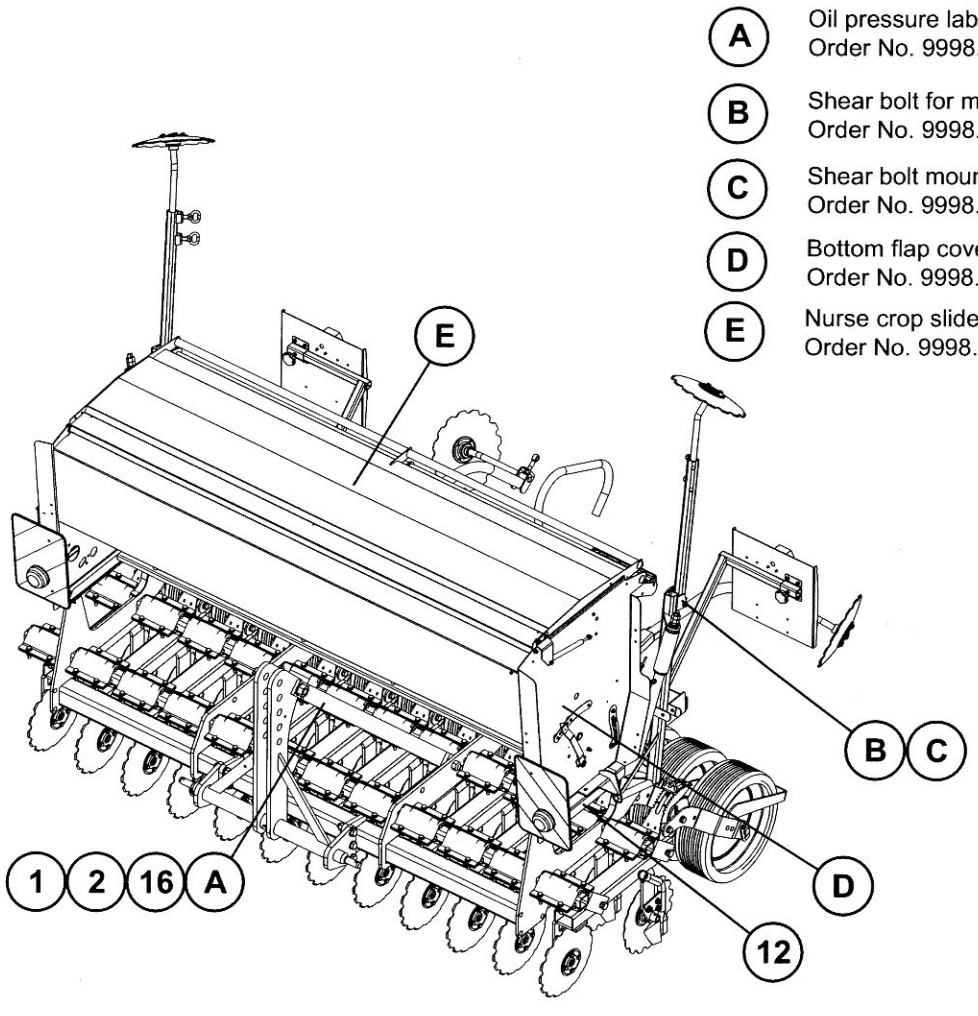
## 12. Positioning of warning symbols on the unit




For explanation, see the warning signs which follow!